



US006370083B1

(12) **United States Patent**  
**Foreman**

(10) **Patent No.:** **US 6,370,083 B1**  
(45) **Date of Patent:** **Apr. 9, 2002**

(54) **METHOD AND APPARATUS FOR  
DETECTING ACOUSTIC SIGNALS FROM A  
PLURALITY OF ACOUSTIC SIGNAL  
SENSORS**

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(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

An apparatus and method for detecting acoustic signals from a plurality of acoustic signal sensors. The apparatus comprises a plurality of acoustic signal detection channels. Each channel has an input for receiving acoustic signals from a corresponding acoustic signal sensor and includes circuitry for amplifying the received acoustic signals, removing the D.C. components from the amplified acoustic signals and removing all frequency components from the amplified acoustic signals which are above a predetermined frequency. The apparatus further comprises a circuitry for summing all of the acoustic signals outputted from the acoustic signal detection channels to form a single acoustic signal and for converting the single acoustic signal into a differential signal if at least one acoustic signal sensor senses an acoustic signal and its corresponding acoustic signal detection channel outputs an acoustic signal.

(21) Appl. No.: **09/638,797**

(22) Filed: **Aug. 10, 2000**

(51) **Int. Cl.**<sup>7</sup> ..... **G01S 3/80**

(52) **U.S. Cl.** ..... **367/126; 367/124; 367/129**

(58) **Field of Search** ..... **367/124, 126,  
367/129**

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**12 Claims, 2 Drawing Sheets**

